1: Which of the following is a quantitative measure of the degree to which a system, component, or process possesses a given attribute:

A: Measurement

B: Weight

C: Metric

D: Measure

Correct answer: C

2: Software quality metrics is a ---------- whose inputs are software data and whose output is a single numerical value that can be interpreted as the degree to which the software possesses a given quality attribute:

A: Measurement

B: Function

C: Metric

D: Measure

Correct answer: B

3: Objectives of quality measurement are:

A: Facilitate management control, planning and managerial intervention

B: Identify situations for development or maintenance process improvement

C: Both A & B

D: None of above

Correct answer: C

4: Software quality metrics- Operative requirements are:

A: Easy and simple

B: Does not require independent data collection

C: Immune to biased interventions by interested parties

D: All of above

Correct answer: D

5: What to measure in a project?

A: Track risk of project

B: Pre-defined project attributes

C: Efficacy of project

D: Both B & C

Correct answer: A

6: Process Metrics is used for:

A: describe the characteristics of product

B: improving software development/maintenance process

C: effectiveness of defect removal

D: Both B & C

Correct answer: D

7: NFP is a measure of ---------- required to develop a program, based on the functionality specified for the software system:

A: Size of software

B: Development resources

C: Lines of code

D: both A & B

Correct answer: B

8: Software process quality metrics is categorized into:

A: Software process timetable metrics

B: Software process productivity metrics

C: None

D: both A & B

Correct answer: C

9: A software development department applies two alternative measures, NCE and WCE, to the code errors detected in its software development projects. Three classes of error severity and their relative weights are also defined i.e., there were 42 low severity errors, 17 medium severity errors, and 11 high severity errors. Calculate WCE:

Error severity class	Relative weight
Low severity	1
Medium severity	3
High severity	9

A: 192

B: 70

C: 119

D: not possible

Correct answer: A

10: The metrics belonging to ---------- group are used to detect adverse situations of increasing numbers of severe errors in situations where errors and weighted errors, as measured by error density metrics, are generally decreasing:

A: Error density metrics

B: Error removal effectiveness metrics

C: Error severity metrics

D: Software productivity metrics

Correct answer: C

11: Average severity of code errors ASCE =WCE/NCE if there were 42 low severity errors, 17 medium severity errors, and 11 high severity errors. Calculate ASCE:

Error severity class	Relative weight
Low severity	1
Medium severity	3
High severity	9

A: 9.6

B: 1.6

C: 0.3

D: 2.7

Correct answer: D

12: Calculation of error density metrics involves -------- measures:

A: one

B: two

C: three

D: four

Correct answer: B

13: Software volume measure uses:

A: line of codes

B: error severity

C: error count

D: none of above

Correct answer: A

14: Calculation formula of error removal effectiveness metrics DERE is

A: DERE=WDE/(WDE+WYF)

B: DERE=(NDE+NYF)/NDE

C: DERE=NDE/(NDE+NYF)

D: DERE=NDE/(NDE-NYF)

Correct Answer: C

15: Software process timetable metrics are TTO and

A: DWERE

B: ADMC

C: CRe

D: None

Correct Answer: B

16: Software process productivity metrics include

A: Direct Metrics

B: Indirect Metrics

C: Both

D: None

Correct Answer: C

17: Calculation Formula of process productivity metrics DevP is

A: DevP=DevH/KLOC

B: DevP=DevH/NFP

C: DevP=DevH/(KLOC+NFP)

D: None

Correct Answer: A

19: Types of product metrics are

A: 5

B: 4

C: 3

D: 2

Correct Answer: D

20: Software maintenance activities include

A: Corrective Maintenance

B: Adaptive Maintenance

C: Functional improvement maintenance

D: All

Correct Answer: D

Q1: Types of review are?

A: code review

B: design review

C: test readiness

D: All of these

Correct Answer: **D**

Q2: Identify any defects early will result in?

A: time saving

B: cost saving

C: both A and B

D: None of these

Correct Answer: **C**

Q3: Benefits of review are?

A: Measure the progress of the project

B: Assure that the deliverable is technically correct

C: Assure the quality of deliverable before the development process is allowed to continue

D: A number of team members get an opportunity to provide their input

Correct Answer: **D**

Q4: The deliverable provides the information required for the next phase and the deliverable is complete and correct.

A: Technical review

B: Business Review

C: Inspection

D: All of the above

Correct Answer: **B**

Q5: Software reviews are __ for software engineering process.

A: Filter

B: Connected

C: both A and B

D: None of the above

Correct Answer: **A**

Q6: Reviews are applied at several points during software development and serve to ___that can then be removed

A: uncover errors and defects

B: purify the software engineering activities

C: make errors

D: None of the above

Correct Answer: **A**

Q7: Objectives of management reviews are:

A: Ensure a deliverable is ready for management approval

B: Resolve issues that require management's attention

C: Validate from a management perspective

D: All of these

Correct Answer: **D**

Q8: The main tasks of the review leader in the preparation stage are:

A: To appoint the team members

B: To schedule the review sessions

C: both A and B

D: To Validate the members

Correct Answer: **C**

Q9: A process or meeting during which a work product, or set of work products, is presented to project personnel, managers, users, customers, or other interested parties for comment or approval is called:

A: Review Process

B: Business Review

C: Inspection

D: Expert Reviews

Correct Answer: **A**

Q10: Discussing, making decisions, evaluating alternatives and finding defects are the main purposes of:

A: Informal Review

B: Inspection

C: Technical Review

D: Walkthrough

Correct Answer: **C**

Q11: Which of the following are the main characteristics of inspection?
i) includes metrics gathering
ii) defined roles
iii) meeting led by author

A: (i) and (ii)

B: (ii) and (iii)

C: (i) and (iii)

D: All

Correct Answer: **A**

Q12: Which of the following is the main purpose of an informal review?

A: inexpensive way to get some benefit

B: learning and gaining the understanding

C: solving technical problems and checking conformance to specifications

D: finding defects

Correct Answer: **A**

1- Static testing is a type of testing which requires

a. source code of the product
b. binaries or executables.
c. All of above
d. None

2- The method relies completely on the author's thoroughness, diligence, and skills:

a. Desk Checking
b. Code walkthrough
c. Code review
d. Code inspection

3- In ------, assets of people look at the program code and raise questions for the author.

a. Desk Checking
b. Walkthroughs
c. Code review
d. Code inspection

4- ---- is a method, normally with a high degree of formalism:

a. Desk Checking
b. Code walkthrough
c. Code review
d. Code inspection

5- The ---- in inspection informs the team about the date, time, and venue of the inspection meeting.

a. Author
b. Moderator
c. Inspectors
d. Scribe

6- Desk checking, walkthrough, review and inspection are only used for code and can’t be used for all other deliverables in the project life cycle.

a. True
b. False

7- The percentage of code covered by a test is found by adopting a technique called instrumentation of code.

a. True
b. False

8- Which of the following is a static testing technique?

a. Unit testing
b. Condition Coverage
c. Code inspection

d. Cyclomatic complexity

9- Path coverage relates to ----- in the program:

a. Actual path
b. Physical path
c. Logical path
d. None

10- If we have covered all the paths, it would mean that the program is fully tested.

a. True
b. False

11- In function coverage, the requirements of a product are mapped into functions during ----- phase and each of the functions form a logical unit.

a. Implementation
b. Design
c. Development
d. Testing

12- The requirements traceability matrix track a requirement through:

a. Design phase
b. Coding phase
c. Testing phase
d. All of the mentioned

13- Function coverage provides a natural transition to

a. White box testing
b. Black box testing
c. All of the above
d. None of the above

14- Code coverage is usually achievable

a. 20-30 percent
b. 40-50 percent
c. 60-70 percent
d. 80-95 percent

15- The Cyclomatic Complexity, V(G) is given by which formula

a. V(G) = edges – nodes + 2

b. V(G) = edges – 2nodes + P

c. V(G) = edges – 2node

d. None of the above

16- What is Cyclomatic complexity?

a) Black box testing

b) White box testing

c) Yellow box testing

d) Green box testing

17- White Box techniques are also classified as

a) Design based testing

b) Structural testing

c) Error guessing technique

d) None of the mentioned

18- Which of the following is/are White box technique?

a) Statement Testing

b) Decision Testing

c) Condition Coverage

d) All of the mentioned

19-The testing in which code is checked

a. Black box testing

b. White box testing

c. Red box testing

d. Green box testing

20-White box testing is also known as

a. Open box

b. Grey box

c. All of the above

d. None of the above

21-White box testing is classified into

a. Static and structural testing

b. Static and functional testing

c. Static and regression testing

d. None of the above

22-White box testing takes account

a. Code structure

b. Program code

c. Internal design

d. All of the above

23-In Structural testing we find errors by test running on

a. Code

b. Built project

c. Design document

d. Not of the above

24- 1. ……..., sometimes called glass-box testing, is a test case design method that uses the control structure of the procedural design to derive test cases.

a)White-box testing

b) Control structure testing

c) Black-box testing

d) Gray-box testing

25- In …….., test cases are derived to ensure that all statements in the program have been executed at least once during testing and that all logical conditions have been exercised.

a) White-box testing

b) Control structure testing

c) Black-box testing

d) Gray-box testing

26- white box testing is a way of testing ------- by examine and testing the program of the code

a. External functionality of the code

b. internal functionality of the code

c. both external and internal functionality

d. not external nor internal functionality

27- Code coverage testing involves

a. dynamic testing

b. static testing

c. all of the above

d. none of the above

28- which of the following is structural testing technique

a. code walkthrough

b. code coverage

c. desk checking

d. code inspection

29- Static testing does not involve

a. **executing the codes on computers**

b. source code

c. none of the above

d. all of the above

30- white box testing involves testing of software code for the following

a. internal security holes

b. broken and poorly structured paths in the coding processes

c. expected output

d. **all of the above**

MCQ's

Q1: Integration is defined as the set of interactions among _____?

A: Components

B: Systems

C: Graphs

D: Modules

Correct Answer: A

Q2: Testing the interaction between he modules and interaction with other systems externally is called _____?

A: Internal Testing

B: Integration Testing

C: Bug Fixing

D: White Hat Fix

Correct Answer: B

Q3: Integration testing is aimed at testing the interactions among the _____?

A: Internals

B: Modules

C: Systems

D: Bugs

Correct Answer: B

Q4: Inegration testing means testing of _____?

A: Internals

B: Interfaces

C: Systems

D: Bugs

Correct Answer: B

Q5 It is used as an API by JAVA _____?

A: JDBC

B: JBC

C: API

D: Bugs

Correct Answer: A

Q6: One of the methods of achieving interfaces is by providing _____?

A: DPI

B: API

C: Hosting

D: Domain

Correct Answer: B

Q7: Integration testing is done by _____?

A: Use Cases

B: Test Cases

C: Systems

D: Bugs

Correct Answer: B

Q8: The iterative and agile model is an example to explain the different paths _____?

A: Use Cases

B: Logic Flow

C: Systems

D: Bugs

Correct Answer: B

Q9: Bi-directional integration is combination of top-down and _____?

A: Bottom-Up

B: Bottom_Down

C: Up-Left

D: Down-Right

Correct Answer: A

Q10: System integration means that all the components of the system are _____?

A: Use Cases

B: Integrated

C: Bugs

D: Systems

Correct Answer: B

Q11: The suggested integration method for “Clear requirements and design” is _____?

A: Up-Left

B: Top-down

C: Bottom-Right

D: Big-bang

Correct Answer: B

Q12: The suggested integration method for “Dynamically changing requirements” is _____?

A: Up-Left

B: Top-down

C: Bottom-Up

D: Big-bang

Correct Answer: C

Q13: The suggested integration method for “Changing architecture, stable design” is _____?

A: Up-Left

B: Top-down

C: Bottom-Right

D: Bi-directional

Correct Answer: D

Q14: The suggested integration method for “Limited changes to existing architecture with less impact” is _____?

A: Up-Left

B: Top-down

C: Bottom-Right

D: Big-bang

Correct Answer: D

Q15: Unplanned testing is termed as _____?

A: Up-Left

B: Ad Hoc Testing

C: Exploratory testing

D: Monkey testing

Correct Answer: B

Q16: Scenario testing is defined as “set of realistic user activities that are used for evaluating the _____”?

A: Up-Left

B: Scenario

C: Product

D: Monkey testing

Correct Answer: C

Q17: Visualizing these different types of tests make the product _____”?

A: Up-Left

B: Multi-Purpose

C: Product

D: Monkey testing

Correct Answer: B

Q18: A use case scenario is a _____ procedure ?

A: Stepwise

B: Scenario

C: Product

D: Monkey testing

Correct Answer: A

Q19: Users with a specific role to interact between the actors and the system are called _____?

A: Agents

B: Scenario

C: Product

D: Monkey testing

Correct Answer: A

Q20: _____ is an ad hos testing ?

A: Defect bash

B: Scenario

C: Product

D: Monkey testing

Correct Answer: A

Q21: Defect bash is an activity involving a large amount of _____?

A: Effort

B: Steps

C: Duration

D: Monkey testing

Correct Answer: A

Q22: The further classification of defect bash is _____?

A: Effort

B: Product defect bash

C: Team effort

D: Monkey testing

Correct Answer: B

Q23: An approach to reduce the defect bash is to conduct _____ defect bash ?

A: Effort

B: Steps

C: Micro Level

D: Monkey testing

Correct Answer: C

Q24: Defect bash brings together plenty of good practices that are popular in ___ industry ?

A: Effort

B: Testing

C: Micro Level

D: Monkey testing

Correct Answer: B

Q25: A use case can involve several ___ ?

A: Effort

B: Steps

C: Roles

D: Monkey testing

Correct Answer: C

Q26: ____ is always a big question with respect to scenario testing ?

A: Coverage

B: Steps

C: Micro Level

D: Monkey testing

Correct Answer: A

Q27: A method to evolve scenarios ?

A: Effort

B: System Scenarios

C: Micro Level

D: Monkey testing

Correct Answer: B

Q28: System Integration using big bang approach is well suited in ?

A: Effort

B: Product Development

C: Micro Level

D: Monkey testing

Correct Answer: B

Q29: _____ using big bang approach is well suited in Product Development ?

A: Effort

B: System integration

C: Micro Level

D: Monkey testing

Correct Answer: B

Q30: System Integration using _____ approach is well suited in Product Development ?

A: Effort

B: Big Bang

C: Micro Level

D: Monkey testing

Correct Answer: B

LOREM IPSUM FOR

2021

Chapter # 4

Submitted to:

Prof. Adnan Bashir

Chapter #4

This set of JUnit Multiple Choice Questions & Answers (MCQs) focuses on “Black Box Testing”.

1. LSD stands for _____
a) Lean Software Development
b) Live Software Development
c) Less Software Data
d) Least Software Dataloss

Answer: a

2. Lean philosophy regards everything not adding value to the customer as _____
a) Unnecessary
b) Waste
c) Useful
d) Necessary

Answer: b

3. A value _____ technique is used to identify waste.
a) Mapping
b) Stream
c) Stream Mapping
d) Flow

Answer: c

paradigm that specifies any manageable system as being limited in achieving more of its goals by a very small number of constraints.
a) RCM
b) TPM
c) QRM
d) TOC

Answer: d

5. _____ in the code are signs of bad code designs and should be avoided.
a) Repetitions
b) Modularity
c) Functions
d) Documentation

Answer: a

6. Lean Development follows the principle of _____
a) Decide as late as possible
b) Deliver as late as possible

c) Decide as early as possible
d) Not building integrity

Answer: a

7. _____ is a client-centric, architecture-centric, and pragmatic software process.
a) Loss Testing
b) Feature Driven Development
c) DSDM
d) Scrum

Answer: b

8. _____ consists of exploring and explaining the domain of the problem to be solved.
a) Feature Teams
b) Inspections
c) Domain Object Modelling
d) Configuration Management

Answer: c

9. _____ ensure there is always an up-to-date system that can be demonstrated to the client.
a) Domain Object Modelling
b) Individual Class (Code) Ownership
c) Visibility of progress and results
d) Regular Builds

Answer: d

10. _____ helps visualizing both the processes and the data of a method.
a) Configuration Management.
b) Domain Object Modelling
c) MetaModeling
d) Inspections

Answer: c

.

11. _____ defines “a flexible, holistic product development strategy where a development team works as a unit to reach a common goal”.
a) Scrum
b) FDD
c) DevOps
d) MDD

Answer: a

12. A key principle of Scrum is _____
a) Strict requirements
b) Requirements volatility
c) Fixed scale development
d) Cross-functional development

Answer: b

13. The _____ represents the product's stakeholders and the voice of the customer
a) Development Team
b) Scrum Master
c) Product Owner
d) Servant-leader

Answer: c

14. A _____ is the basic unit of development in Scrum.
a) Class
b) Manifesto
c) Slice
d) Sprint

Answer: d

15. The Sprint is a/an _____ effort.
a) Timeboxed
b) Closed
c) Sandboxed
d) Open

Answer: a

16. Each day during a Sprint, the team holds a _____ with specific guidelines.
a) Impediment
b) Daily Scrum
c) Backlog refinement
d) Scrum of Scrums

Answer: b

17. At the _____ the team reflects on the past Sprint.
a) Sprint Review
b) Daily Scrum
c) Sprint Retrospective
d) Sprint Reflection

Answer: c

18. The _____ comprises an ordered list of requirements that a Scrum Team maintains for a product.
a) Sprint Review
b) Sprint Backlog
c) Product Increment
d) Product backlog

Answer: d

19. The _____ is the list of work the Development Team must address during the next Sprint.
a) Sprint Review
b) Sprint Backlog
c) Product Increment
d) Product backlog

Answer: b

20. The _____ is the sum of all the Product Backlog Items completed during a Sprint.
a) Sprint burn-down char
b) Release burn-up chart
c) Potentially shippable increment
d) Scrumban

Answer: c

21. _____ is an adaptable process framework, intended to be tailored by the development organizations that will select the elements of the process that are appropriate for their needs.
a) RUP
b) AOP
c) FDD
d) XP

Answer: a

22. UML stands for _____
a) Unknown Markup Language
b) Unified Modelling Language
c) Universal Markup Language
d) Universal Modelling Language

Answer: b

23. _____ describes a simple and easy to understand approach to developing business application software using agile techniques and concepts while still remaining true to the RUP.
a) RUPP

b) Scrum
c) AUP
d) EUP

Answer: c

24. _____ is a methodology for modelling and documenting software systems based on best practices.
a) TDD
b) FDD
c) Scrum
d) AM

Answer: d

25. The discipline of AUP which deals with managing access to project artefacts is called _____
a) Model
b) Deployment
c) Project Management
d) Configuration Management

Answer: d

26. Random testing often known as _____ testing
a) Monkey
b) Amorous
c) Sporadic
d) Unknown

Answer: a

27. Monkey Testing is also included in Android Studio as part of the standard testing tools for _____
a) Unit Testing
b) Stress Testing
c) Functional Testing
d) Integration Testing

Answer: b

28. _____ have no knowledge about the application or system in monkey testing.
a) Cloned Objects
b) Smart Monkey tests
c) Dumb Monkey tests
d) Fuzz tests

Answer: c

29. Monkey testing is more about random actions while _____ testing is more about random data input.
a) Fuzz
b) Functional
c) Ad-hoc
d) Random

Answer: a

30. Monkey testing is also different from _____ testing in that ad-hoc testing is performed without planning and documentation.
a) Fuzz
b) Functional
c) Ad-hoc
d) Random

Answer: c

1- Identify the element of a quality plan.

a) planned software tests

b) quality goals

c) review activities

d) all of above

Correct option: d

2- identify the element of development plan

a) acceptance tests

b) configuration management

c) project interfaces

d) none of these

Correct option: c

3- For project milestones, _____ is defined:

a) completion time

b) project products

c) design reviews

d) both a and b

Correct option: d

4- _____ plan may be prepared as part of the development plan or as an independent document

a) quality plan

b) development plan

c) management plan

d) none

Correct option: a

5- Internal projects can be of:

a) small scale

b) medium scale

c) large scale

d) both b and c

Correct option: d

6- What are the objectives of development and quality plan:

a) reducing the cost

b) resolving development risks

c) estimating budget

d) all of above

Correct option: b

7- Identify the major software risk items.

a) technological gaps

b) budget overflow

c) lack of software testing

d) none of these

Correct option: a

8- risk management actions can be grouped into _____ classes:

a) two

b) three

c) four

d) five

Correct option: b

9- Project products include:

a) hardware products

b) training tasks

c) both a and b

d) none

Correct option: b

10- the mapping of development process involved:

a) estimate of activity's duration

b) sequence in which each activity is to be performed

c) requirement and estimation of professional resources

d) all of above

Correct option: d

11- most common method for scheduling the development process is:

a) area chart

b) waterfall chart

c) gantt chart

d) pie chart

Correct option: c

12- development facilities include

a) hardware tools

b) software tools

c) office space

d) all of above

Correct option: d

13- which method is preferred for quality goals.

a) quantitative method

b) qualitative method

c) both a and b

d) depends on situation

Correct option: a

14- advantages of planned over unplanned projects are

a) faster work rate

b) requires less budget

c) comprehensive understanding of task

d) all of above

Correct option: c

15- _____ are major elements needed for project compliance

a) quality plans

b) management plans

c) development plans

d) both a and c

Correct option: d

16- what are the objectives of development and quality planning:

a) scheduling development activities

b) providing management

c) allocating development resources

d) all of above

Correct option: d

17- Software tests must be included in:

a) project activities

b) control methods

c) cost estimation activities

d) none of these

Correct option: a

18- "a state of development task or environment, which, if ignored, will increase the likelihood of project failure" is_____.

a) project risks

b) management risk

c) development risks

d) all of above

Correct option: c

19- in acceptance test, which items should be included:

a) purchased software

b) customer supplied software

c) software developed by subcontractors

d) all of above

Correct option: d

20- quality plan can be divided into further _____ plans

a) dr plan

b) testing plan

c) both b and a

d) none

Correct option: c

21- _____ projects are those projects intended for use by other departments in the organization or by entire organization

a) internal

b) external

c) depends

d) none

Correct option: a

22- development departments can enjoy advantages of plan preparation:

a) avoiding budgets overruns

b) avoiding loss of market status

c) avoiding damage to other projects cased by delays in release of professionals occupied in an internal project

d) all of above

Correct option: d

23- internal customer can enjoy the following advantage:

a) better control over the development process

b) fewer internal delay damages

c) both a and b

d) none of these

Correct option: c

24- Organization can enjoy the following advantages:

a) smaller deviations from planned completion dates.

b) reduced risk of market loss

c) avoiding budget overruns

d) all of above

Correct option: b

25- which projects development and quality plans.

a) small

b) based on proposal materials

c) complex

d) medium

Correct option: b

26- development plan has _____ elements

a) eight

b) nine

c) ten

d) eleven

Correct option: d

27- quality plan has _____ elements

a) five

b) six

c) seven

d) eight

Correct option: a

28- what are the recommended elements of plans for small projects

a) project benchmarks

b) development risks

c) estimates of project costs

d) all of above

Correct option: d

29- the pertinent planning activities are identification of

a) SRI

b) evaluation of those SRI's

c) planning RMAs to resolve the SRIs

d) all of the above

Correct option: d

30- Technological gap means

a) lack of adequate and sufficient professional knowledge

b) lack of advance technology

c) lack of budget

d) all of above

Correct option: a

Chapter #1

The Software Quality Challenge

1. Product complexity can be measured by the number of _____ the product permits.
   a) Operational sequences
   b) Operational modes
   c) Operational times
   d) Times

   Correct option: (b) Operational modes

2. Most of the defects in an industrial product can be detected during the _____.
   a) Sales
   b) Delivery
   c) **Manufacturing process**
   d) Inspection

   Correct option: (c) Manufacturing process

3. The phases at which the possibility of detecting defects in an industrial product may arise:
   a) Delivery phase
   b) Product development and production phase
   c) Both of these
   d) None of above

   Correct option: (b) Product development and production phase

4. In which phase the designers and quality assurance (QA) staff check and test the product prototype, in order to detect its defects.
   a) Delivery phase
   b) Product development
   c) Both of these

d) None of above

Correct option: (b) Product development

5. In which phase the production process and tools are designed and prepared?
a) Product development
b) Delivery
c) Product production planning
d) None of above

Correct option: (c) Product production planning

6. In which phase we can reveal defects that "escaped" the reviews and tests conducted during the development phase.
a) Product development
b) Delivery
c) Product production planning
d) None of above

Correct option: (c) Product production planning

7. At what phase QA procedures are applied to detect failures of products themselves.
a) Delivery
b) Development
c) Manufacturing
d) None of above

Correct option: (c) Manufacturing

8. The only phase when defects can be detected is the
a) Delivery phase
b) Development phase
c) Designing phase
d) None of above

Correct option: (b) Development phase

9. What are the phases involved in detection of defects?
a) Product development
b) Product production planning
c) Manufacturing
d) All of above

Correct option: (d) All of above

10. Which of the following is the characteristic of the environment of professional software development and maintenance?
a) Contractual condition
b) Subjection to customer–supplier relationship
c) Required teamwork
d) All of above

Correct option: (d) All of above

11. Which of the following is not the characteristic of the environment of professional software development and maintenance?

a) Contractual condition
b) Subjection to customer–supplier relationship
c) Required teamwork
d) Manufacturing

Correct option: (d) Manufacturing

12. What are the main types of interfaces?

a) Input interfaces
b) Output interfaces
c) Both
d) None of these

Correct option: (c) Both

13. The interfaces where other software systems transmit data to your software system are called?

a) Input interfaces
b) Output interfaces
c) Both
d) None of these

Correct option: (a) Input interfaces

14. The interfaces where your software system transmits processed data to other software systems are called?

a) Input interfaces
b) Output interfaces
c) Both
d) None of these

Correct option: (b) Output interfaces

15. Which of the following factors motivates the establishment of a project team rather than assigning the project to one professional?

a) Timetable requirements
b) Need for a variety of specializations
c) Wish to benefit from professional mutual support
d) All of above

Correct option: (d) All of above

Chapter #2

What is Software Quality?

16. Computer programs, procedures and data pertaining to the operation of a computer system is called:
a) Hardware
b) Software
c) Computer
d) Data

Correct option: (b) Software

17. Four components of software are:
a) Computer programs, Procedures, Documentation, Data
b) Software, Hardware, Data, Program
c) Computer programs, Procedures, Software, Data
d) Computer Programs, Procedures, Hardware, Data

Correct option: (a) Computer programs, Procedures, Documentation, Data

18. The origin of software failures lies in a _____ made by a programmer.
a) Software
b) Hardware
c) Software error
d) Program

Correct option: (c) Software error

19. The faulty definition of requirements, usually prepared by the client, is one of the main causes of _____.
a) Confusion
b) Software errors
c) Both
d) None of these

Correct option: (b) Software errors

20. The most common errors happen due to the faulty definition of requirements, usually prepared by the client are:
a) Erroneous definition of requirements
b) Absence of vital requirements
c) Inclusion of unnecessary requirements
d) All of above

Correct option: (d) All of above

21. Which of the following are the causes of software errors?
a) Faulty definition of requirements
b) Client–developer communication failures
c) Deliberate deviations from software requirements
d) All of above

Correct option: (d) All of above

22. Which of the following are the causes of software errors?

a) Procedure errors
b) Documentation errors
c) Documentation errors
d) All of above

Correct option: (d) All of above

23. The degree to which a system, component, or process meets specified requirements is called?

a) **Software Quality**
b) Software Quantity
c) coding
d) None of above

Correct option: (a) Software Quality

24. The objectives of SQA activities refer to the _____, _____ and _____ aspects of software development and software maintenance:

a) **Functional, managerial and economic**
b) Non-Functional, managerial and economic
c) Structural, managerial and economic
d) None of these

Correct option: (a) Functional, managerial and economic

25. Software faults are software _____ that cause the incorrect functioning of the software during a specific application.

a) Improvement
b) Features
c) Errors
d) None of above

Correct option: (c) Errors

26. Software faults become _____ only when they are "activated", that is, when a user tries to apply the specific software section that is faulty.

a) Software limitations
b) Software Features
c) Hardware failures
d) Software failures

Correct option: (d) Software failures

27. the root of any software failure is a _____.

a) Hardware errors
b) Software error
c) Software limitations
d) Hardware limitations

Correct option: (b) Software error

28. The objectives of SQA activities for software development and maintenance are:

a) Assuring, with acceptable levels of confidence, conformance to functional technical requirements
b) Assuring, with acceptable levels of confidence, conformance to managerial requirements of scheduling and budgets
c) Initiating and managing activities for the improvement and greater efficiency of software development and SQA activities
d) **All of above**

Correct option: (d) All of above

29. _____ is a set of activities carried out with the main objective of withholding products from shipment if they do not qualify.

a) Quality control
b) Software control
c) Hardware control
d) None of these

Correct option: (a) Quality control

30. _____ is meant to minimize the costs of quality by introducing a variety of activities throughout the development and maintenance process.

a) Quality assurance
b) Hardware assurance
c) Quality control
d) Hardware control

Correct option: (a) Quality assurance

Q1: SQA system components can be classified into _ classes.

A. 5
B. 6
C. 4
D. 7

Correct Answer: B

Q2: Objective of which SQA system component is to define managerial support actions that mainly prevent or minimize schedule and budget failures and their outcomes.

A. software quality management
B. infrastructure error prevention and improvement
C. project life cycle activities assessment
D. Pre-Project Components

Correct Answer: A

Q3. The main issues treated in project development plan is

A. Risk Evaluation
B. Software Reuse Plan
C. Both
D. None

Correct Answer: C

Q4. To assure that the development and quality plans have been correctly determined falls in which component

A. software quality management

B. Organizing for SQA
C. Pre-Project Components
D. None

Correct Answer: C

Q5. Who performs a contract review?

A. The leader of the proposal team
B. A team of outside experts
C. Both
D. None

Correct Answer: C

Q6. The project life cycle is composed of _ stages:

A. 3
B. 4
C. 5
D. 2

Correct Answer: D

Q7. Which is not a component of Software project life cycle

A. Reviews
B. Expert Opinion
C. Software Testing
D. Software Deployment

Correct Answer: D

Q8. The design phase of the development process produces a variety of documents include:

A. design reports
B. Software Test Documents
C. Software Installation Plans
D. All of the above

Correct Answer: D

Q9. Count of members in an efficient review team is:

A. 4-7
B. 3-5
C. 3-6
D. 4-6

Correct Answer: B

Q10. To Issue a DR report is a responsibility of:

A. Software Developer
B. Software Tester
C. Review Leader
D. Team Leader

Correct Answer: C

Q11. to detect design and programming faults is an objective of:

A. Formal Design Review
B. Peer Review
C. Both

D. None

Correct Answer: B

Q12. Software Testing examine:

A. Modules
B. Integration
C. Entire Packages
D. All of the above

Correct Answer: D

Q13. Recurrent Tests can also be called as:

A. Module Tests
B. Connection Tests
C. Regression Tests
D. Whole Software Test

Correct Answer: C

Q14. Why project team should not be involved in software testing?

A. Because they are not so qualified
B. Because they want the project to be approved
C. because they failed to detect defects during development
D. All off the above

Correct Answer: C

Q15. The test report will include a detailed list of:

A. Features Detected
B. Faults Detected
C. Warnings
D. User Manual

Correct Answer: B

Q16. Which of the following is not a part of software maintenance components?

A. Collective Maintenance
B. Corrective Maintenance
C. Adaptive Maintenance
D. Perfective Maintenance

Correct Answer: A

Q17. Adjusts the software package to the requirements of new customers and changing environmental conditions falls in:

A. Perfective Maintenance
B. Collective Maintenance
C. Adaptive Maintenance
D. None of the above

Correct Answer: C

Q18. Budget limitation is provided by:

A. Team Leader
B. SQA Engineer
C. Software Tester
D. Service Provider

Correct Answer: D

Q19. What is the goal of Infrastructure components for error prevention and improvement?

A. Improve Productivity
B. Prevent Software Faults
C. Lower Software Faults
D. All of the above

Correct Answer: D

Q20. The likelihood that external participant will be required is greater if the project is:

A. Smaller
B. Larger
C. Mediocre
D. None of the mentioned

Correct Answer: B

Q21. Procedures and work instructions are based on:

A. Organization’s Experience
B. Organization’s Knowledge
C. Both
D. None

Correct Answer: C

Q22. Keeping an organization’s human resources knowledgeable and updated at the level required is achieved mainly by:

A. Updating organization’s hardware
B. Training new staff
C. Downgrading staff
D. Removing skilled staff

Correct Answer: B

Q23. Configuration management deals with which hazards by introducing procedures to control the change process:

A. approval of changes
B. the recording of those changes performed
C. the issuing of new software versions and releases
D. All of the above

Correct Answer: D

Q24. Controlled documents contain information important to the _____ development and maintenance of the software system.

A. Long-term
B. Short-term
C. Instant
D. Delayed

Correct Answer: A

Q25. The components that support the managerial control of software development project and maintenance services are except.

A. Project progress control
B. Software quality metrics
C. Software quality costs
D. Software errors

Correct Answer: D

Q26. Project control activity focus on:

A. Project schedule control
B. Project resource control
C. Project budget control
D. All of the above

Correct Answer: D

Q27. You can't control what you can't ___:

A. Achieve
B. Order
C. Measure
D. All of the above

Correct Answer: C

Q28. SQA standards can be classified into __ main sub-classes.

A. 3

B. 2
C. 4
D. 5

Correct Answer: B

Q29. Which of the following is not a responsibility of top management, departmental management, and project management?

A. Assignment of adequate staff
B. Decide project framework
C. Allocation of sufficient resources to implement quality policy
D. Definition of the quality policy

Correct Answer: B

Q30. Who are SQA trustees?

A. Project Manager
B. Software Tester
C. Member of development and maintenance teams
D. Stakeholders

Correct Answer: C

1)Bootstrap institute operates in

a) Europe

b) Asia

c) China

d) Russia

Europe

2) European Strategic Program for Research in Information Technology(ESPRIT) in cooperation with the European Software Institute (ESI), offers another route for professional ____ support to organizations, based on its Bootstrap methodology.

a) SPM

b) SQA

c) Project Management

d) Project limitation

SQA

3) The Bootstrap methodology measures the maturity of an organization and its projects on the basis of 31 quality attributes grouped into ___ classes:

a) 1

b) 2

c) 3

d) 4

3

4) CMM in bootstrap methodology stands for

a) Capability management Model

b) Capability maturity Model

c) Capability Maturity Management

d) Capacity maturity model

Capability maturity Model

4) Bootstrap trains ___ levels of registered assessors

a) 1

b) 2

c) 3

d) 4

3

5) The ISO/IEC 15504 includes 29 processes that the organization has to perform successfully to reach capability level 5 bootstrap methodology into __ groups

a) 7

b) 6

c) 8

d) 5

5

6) In bootstrap methodology, The ISO/IEC 15504 includes 29 processes, Customer–supplier (CUS) have __ processor

a) 9

b) 8

c) 7

d) 5

5

7) The ISO/IEC 15504 model likewise determines the achievements required for each of the relevant process attributes. Achievement grades scale for ISO/IEC 15504 process attributes. Where F(Fully achieved) is

a) 86–100%

b) 51–85%

c) 16–50%

d) 0–15%

86–100%

8) The ISO/IEC 15504 model likewise determines the achievements required for each of the relevant process attributes. Achievement grades scale for ISO/IEC 15504 process attributes. Where L(Largely achieved) is

a) 86–100%

b) 51–85%

c) 16–50%

d) 0–15%

51–85%

9) The ISO/IEC 15504 model likewise determines the achievements required for each of the relevant process attributes. Achievement grades scale for ISO/IEC 15504 process attributes. Where L(Not achieved) is

a) 86–100%

b) 51–85%

c) 16–50%

d) 0–15%

0–15%

10) Structure of the ISO/IEC 15504 assessment model. At level 0, No process attributes are expected. There is no (or only little) implementation of any planned or identified process

a) Incomplete

b) Performed process

c) Managed process

d) Established process.

Incomplete

11) Time required to progress to the next CMM assessment level (Gartner Inc., 2001) Level 1 to level 2 mean time is

a) 24 months

b) 21 months

c) 30 months

d) 15 months

24 months

12) Capability maturity Model level 1 is :

a) Initial

b) Managed

c) Defined

d) Optimized

Initial

13) CMM assessment not based on the following concepts and principles

a) It does not specify any documentation standard.

b) It allows use of any design methodology, software development tool and programming language

c) It allows use of any life cycle model

d) It specifies any documentation standard.

It specifies any documentation standard.

14) _____ focuses on engineering practices related to product-oriented customer requirements. It deals with product development: analysis of requirements, design of product systems, management and coordination of the product systems and their integration
a) System Engineering CMM (SE-CMM)

b) Application Engineering CMM (AE-CMM)

c) System Engineering CNN (SE-CNN)

d) Managed Engineering CMM (ME-CMM)

System Engineering CMM (SE-CMM)

15) Capability maturity Model level 5 is:

a) Initial

b) Managed

c) Defined

d) Optimized

Optimized

16) Capability maturity Model (CMM) have ___ level

a) 4

b) 8

c) 7

d) 5

5

17) ____ was developed to serve sensitive and classified software systems that require enhanced software quality assurance.

a) Trusted CMM (T-CMM)

b) System Security Engineering CMM (SSE-CMM)

c) People CMM (P-CMM)

d) Software Acquisition CMM (SA-CMM)

Trusted CMM (T-CMM)

18) _____ deals with human resource development in software organizations: improvement of professional capacities, motivation, organizational structure, etc.

a) Trusted CMM (T-CMM)

b) System Security Engineering CMM (SSE-CMM)

c) People CMM (P-CMM)

d) Software Acquisition CMM (SA-CMM)

People CMM (P-CMM)

19) _____serves as a framework for integration of development efforts related to every aspect of the product throughout the product life cycle as invested by each department

a) Trusted CMM (T-CMM)

b) Integrated Product Development CMM (IPD-CMM)

c) People CMM (P-CMM)

d) Software Acquisition CMM (SA-CMM)

Integrated Product Development CMM (IPD-CMM)

20) Quality management standards and methodologies focus on

a) “what” of SQA

b) “how” of SQA

c) both

d) none

“what” of SQA

21) The current standard edition of ISO, 9000-3 (ISO 2001) includes 22 requirements that relate to the various aspects of software quality management systems divide into ___ groups

a) 4

b) 8

c) 7

d) 5

5

22) Provision of resources, Human resources, Infrastructure, Work environment are all under _____

a) Quality management system

b) Management responsibilities

c) Resource management

d) Product realization

Resource management

23) Planning of product realization, Customer-related processes, Design, and development, Purchasing, Production and service provision, Control of monitoring and measuring devices are all under _____

a) Quality management system

b) Management responsibilities

c) Resource management

d) Product realization

Product realization

24) For SQA, The certification audits are carried out in _____stages:

a) Review audits and Verification audits

b) Verification audits

c) Review audits

d) none

Review audits and Verification audits

25) focuses on special aspects of software acquisition by treating issues – contract tracking, acquisition risk management, quantitative acquisition management, contract performance management, etc.

a) Trusted CMM (T-CMM)

b) Integrated Product Development CMM (IPD-CMM)

c) People CMM (P-CMM)

d) Software Acquisition CMM (SA-CMM)

Software Acquisition CMM (SA-CMM)

26) The SQA professionals certified does not include:

a) Three authorized CMM lead assessors

b) Some 77 internally trained CMM assessors

c) Some 678 certified quality analysts

d) No quality auditors

No quality auditors

27) In Capability levels and process attribute requirements Process change and Continuous improvement are part of ___ level

a) Predictable process

b) Established process

c) Optimizing process

d) Managed process

Optimizing process

28) SQA stands for

a) software quality assurance

b) system quality assurance

c) software quantity assurance

d) system quantity assurance

software quality assurance

29) Capability maturity Model level 2 is:

a) Initial

b) Managed

c) Defined

d) Optimized

Managed

30) Capability maturity Model level 3 is:

a) Initial

b) Managed

c) Defined

d) Optimized

Defined

Regression Testing Chapter # 8 from Srinivasan Desikan

1. _____ testing is done to ensure that enhancement and detect fixes made to the software works properly and does not affect the existing software
    - **A. Regression**
    - B. Blackbox
    - C. Whitebox
    - D. All of the mentioned

Correct Answer: A

2. Regression Testing follows _____ technique
    - A. Ad-hoc
    - **B. Selective re testing**
    - C. Usecase
    - D. Decision table

Correct Answer: B

3. A regular regression testing is done
    - **A. Between test cycles**
    - B. Before release
    - C. After release
    - D. Anywhere tester wants

Correct Answer: A

4. A regular regression uses

A. No build
B. Single build
C. Multiple build

Correct Answer: C

5. Regression Testing is
   A. Planed test activity
   B. Need Based activity
   C. Both A and B
   D. None of the above

Correct Answer: C

6. Smoke Testing consists of
   A. Identifying the basic functionalities
   B. Designing test cases to ensure that basic functionalities works
   C. Ensuring that every time a product is build this suite is running successfully before anything else is run.
   D. All of the mentioned

Correct Answer: D

7. Which of them is not the criteria for selecting test cases
   A. Include test cases that have produced the maximum defects
   B. Include the area which is highly visible to the users
   C. Include test cases in which problems are not reported
   D. Include test cases to test the positive test cases

Correct Answer: C

8. Regression testing should focus more on
   A. The impact of defect fixes
   B. Criticality of the defect itself

Correct Answer: A

9. Sanity test cases belongs to
   A. Priority 0

B. Priority 1
C. Priority 2
D. All of them

Correct Answer: A

10. 65% of the test cases classified in
A. Priority 0
B. Priority 1
C. Priority 2
D. Depends upon the problem at hand

Correct Answer: C

11. A repository that stores all the testcases that can be used for testing a product
A. Build
B. Configuration Management Repository
C. User Manual
D. TCDB

Correct Answer: D

12. A test engineer selects few test cases from test case database when criticality and impact of defect fixes are
A. High
B. Medium
C. Low
D. Test engineer will always select from TCDB no matter what the situation is

Correct Answer: C

13. If the criticality and impact of defect are High then we need to execute
A. All Priority 0,1,2
B. All Priority 0,1 and subset of Priority 2
C. All Priority 0,1, and a very few of Priority 2
D. Subset of All Priority 0,1,2

Correct Answer: B

14. For effective regression strategy we prefer
A. Priority Based Regression
B. Random Regression

C. Context based Dynamic Regression
D. Combination of all the techniques

Correct Answer: D

15. Doctor: Congrats! Your stomach ulcer is now completely cured, which is bothering you and preventing digestion.

    Patient: That is fine Doctor, but I have got such a bad mouth ulcer that I cant eat anything, so nothing to digest.

    This scenario belongs to which type of testing

    A. Whitebox testing
    B. Blackbox testing
    C. Manual testing
    D. Regression testing

Correct Answer: D

16. Whenever the existing application functionalities is removed.
    A. Test cases can be reset
    B. Test cases cannot be reset
    C. Test case cannot be reset but can be rerun
    D. Test cases neither reset nor rerun

Correct Answer: A

17. A rerun state indicates
    A. Low risk
    B. Medium risk
    C. High Risk
    D. Depends upon the problem

Correct Answer: A

18. A reset state indicates
    A. Low risk
    B. Medium Risk
    C. High Risk
    D. Both Medium and High risk

Correct Answer: D

19. Regression testing between Component test cycle phase uses
    A. Only Priority 0

B. Only Priority 1
C. Only Priority 2
D. All Priorities 0,1, and 2

Correct Answer: A

20. A _____ procedure gives a clear picture of how much a testing still remains, and reflects the status of regression testing

A. Rerun
B. Reset
C. Build
D. None of the above

Correct Answer : B

21. When Regression fails ?

A) when particular test case pass in the current build

B) when particular test case fails in the current build

C) When the result of particular test case pass using the previous build and fails in the current build .

D) None of the above

Correct Answer: C

22) Regression can be use for

A) Some type of releases .

B) Some specific type of releases .

C) All type of releases

D) None of the above

Correct Answer : C

23)Which one improves the quality of regression?

A) Test Cases

B) build

C) identifiers

D) Mapping that detect Identifiers

Correct Answer : D

24) A defect that is classified as minor defect may create a _____ defect on the product when it gets fixed into the code .

A) **major**

B) minor

C) extreme

D) None of the above

Correct Answer: A

25)There can be _____ cycles of regression testing that can be planned every release .

A) Some

B) few

C) **multiple**

D) Many

Correct Answer : C

26)Regression testing provides

A) Spider Net

B) Catching net

C) None of these

D) Mosquito Net

Correct Answer : D

27)If the current regression result and the previous result are both fail then the conclusion will be

A) **Fail**

B) Pass

C) May be fail and may be pass

D) We cannot predict the conclusion

Correct Answer: A

28)Most people want maximum returns with _____ investment on regression testing .

A) Maximum

B) **Minimum**

C) Low

D) High

Correct Answer :B

29)It is expected that ____ of those test cases pass using the same build if defect fixes are done right .

A)100 percent

B)97 percent

C)96 percent

D)98 percent

Correct Answer: A

30)Regression methodology can be applied

A) When we need to access the quality of the product

B) When we are doing a major release of the product

C) When we are doing a minor release of the product

D) All of the above

Correct Answer: D

MCQS

1. Software requirements are classified into how many software qualities factors?
A: 2
B: 3
C: 4
Answer: 3
2. McCall's factor model talks of how many factors?
A: 10
B: 11
C: 12
Answer: 11
3. Product operation factors does not include?
A: Reliability
B: Usability
C: Flexibility
Answer: Flexibility
4. Product operation factors include how many factors?
A: 3
B: 4
C: 5
Answer: 5
5. Product operation factors include:
A: Efficiency
B: Flexibility
C: Reusability
Answer: Efficiency
6. Product revision factors does not include?
A: Reliability
B: Maintainability
C: Flexibility

Answer: Reliability
7. Product revision factors include how many factors?
A: 3
B: 4
C: 5
Answer: 3
8. Product revision factors include:
A: Efficiency
B: Flexibility
C: Reusability
Answer: Flexibility
9. Product transition factors does not include?
A: Reusability
B: Maintainability
C: Interoperability
Answer: Maintainability
10. Product transition factors include how many factors?
A: 3
B: 4
C: 5
Answer: 3
11. Product transition factors include:
A: Efficiency
B: Flexibility
C: Reusability
Answer: Reusability
12. Assuring these 11 factors of McCall's factor model results in:
A: quality attributes
B: quality software
C: quality requirements
Answer: quality software
13. Correctness quality factor includes:
A: Up to date of the information
B: Availability of the information
C: The standard for coding and documenting of software system
D: All above
Answer: All above
14. Downtime for a system will not be more than ten minutes per month, this requirement deals
with:
A: Reliability
B: Maintainability
C: Flexibility
Answer: Reliability
15. Which software quality factor deals with the hardware resources needed to perform all the functions of the software system in conformance to all other requirements.:

A: Reliability
B: Efficiency
C: Flexibility
Answer: Efficiency
16. The Admin(s) are only allowed to access user data or edit/update them for security measures, this requirement belongs to which software quality factor:
A: Flexibility
B: Usability
C: Integrity
Answer: Integrity
17. A staff member should be able to handle at least 60 service calls a day, this requirement deals with which software quality factor:
A: Maintainability
B: Usability
C: Flexibility
Answer: Usability
18. Which quality factor deals with the scope of staff resources needed to train a new employee
and to operate the software system.
A: Maintainability
B: Usability
C: Flexibility
Answer: Usability
19. Which requirements determine the efforts that will be needed by users and maintenance personnel to identify the reasons for software failures, to correct the failures, and to verify the success of the corrections:
A: Maintainability
B: Usability
C: Flexibility
Answer: Maintainability
20. The system can be used by a staff or any person who is not that well educated. It should be
simple enough to use by majority of people, deals with which quality factor:
A: Maintainability
B: Usability
C: Flexibility
Answer: Flexibility
21. The capabilities and efforts required to support adaptive maintenance activities are covered
by which quality factor:
A: Maintainability
B: Usability
C: Flexibility
Answer: Flexibility
22. Testability requirements deal with the testing of an information system as well as with its
A: Operation

B: Structure
C: Specifications
Answer: Operation
23. The system will be tested at multiple environments with large and small data, belongs to which quality factor:
A: Testability
B: Portability
C: Flexibility
Answer: Testability
24. Which requirements tend to the adaptation of a software system to other environments consisting of different hardware, different operating systems, and so forth
A: Testability
B: Portability
C: Flexibility
Answer: Portability
25. The system will run on Windows OS as well as on Linux OS, this requirement comes under
which software quality factor:
A: Testability
B: Portability
C: Flexibility
Answer: Portability
26. Which kind of requirements deal with the use of software modules originally designed for one project in a new software project currently being developed:
A: Usability
B: Reusability
C: Flexibility
Answer: Reusability
27. Which kind of requirements focus on creating interfaces with other software systems or with other equipment firmware:
A: Interoperability
B: Portability
C: Flexibility
Answer: Interoperability
28. How many new factors were suggested in other quality factors models:
A: 3
B: 4
C: 5
Answer: 5
29. Evans and Marciniak offers how many “new” ones:
A: One
B: Two
C: Three
Answer: Two
30. Deutsch and Willis offer “new” ones.
A: Two

B: Three
C: Four
Answer: Three
31. Evans and Marciniak doesn't include which quality factor:
A: Verifiability
B: Expandability
C: Safety
Answer: Safety
32. quality factors usually interest the developer whereas they may raise very little interest on the part of the client:
A: Portability
B: Reusability
C: Verifiability
D: All above
Answer: All above
33. A project will be carried out to according to two requirements documents:
A: The client's requirements document
B: The developer's additional requirements document
C: All above
D: None of above
Answer: All above

1. According to IEEE which of the following is not a component of software?

a) Computer program
b) Procedures
c) Documentation
d) Data required for OS
e) None of these

Answer: E

2. Efficient cooperation, coordination among development team members and efficient reviews and inspection of the design and product are not possible without

a) Project monitoring
b) Development documentation
c) Maintenance documentation
d) None of these
e) b and c

Answer: B

3. All required information of the code, structure and tasks of each software module which is used to locate causes of software failure or to change or add to existing software id written in:

a) Development documentation
b) Deployment documentation
c) Maintenance documentation

d) All of these
e) None of these

Answer: C

4. Can a software package that successfully served an organization for a long period "suddenly" change its nature (quality) and become "bugged"?

a) Yes
b) No
c) Maybe
d) I don't know.

Answer: A

5. The software error can cause improper functioning of the software in general or in a specific application. Do all software faults end with software failures?

a) Yes
b) No
c) Maybe
d) I don't know.

Answer: B

6. A software is designed for a shop that contains a software error in the super customer function. However, the shop's management is not going to use that function anyways. Will this fault result in software failure?

a) Yes
b) No
c) Maybe
d) I don't know.

Answer: B

7. Which of the following option is correct regarding QA and QC?
    a. QC is an integral part of QA
    b. QA is an integral part of QC
    c. QA, and QC are independent of each other
    d. QC may or may not depend on QA

    Answer: A
8. Faults are found most cost-effectively in which test activity?
    a) design
    b) execution
    c) planning
    d) Check Exit criteria completion

    Answer: C
9. Select which option is not true about SQA…?
    a) Audits and reviews to be performed by the team
    b) Amount of technical work to be performed
    c) Evaluations to be performed
    d) All the above

    Answer: C
10. What is QA?

a) It is the measurement of the degree to which a product satisfies the need
b) Any systematic process used to ensure quality in the process
c) Process of identifying defects
d) It is a corrective tool

Answer: B

11. What is the first step of QA?
    a) Development of standards
    b) Identification of customer need
    c) Servicing
    d) Material control

Answer: B

12. Software quality assurance consists of which function of management.
    a. reporting functions
    b. auditing functions
    c. both and b
    d. all of the above

Answer: C

13. Which one of the following is a product-oriented approach?
    a) Quality control
    b) Quality Assurance
    c) Both of the above
    d) None of the mentioned

Answer: A

14. Juran's definition of software quality is aimed at achieving :
    a) customer satisfaction
    b) excellence
    c) efficiency
    d) bugs

Answer A

15. SQA is not limited to meet the technical aspects of a project also It should include the activities of _____
    a) Budgeting
    b) Scheduling
    c) Budgeting and scheduling both
    d) Planning

Answer: C

16. A software error can be:
    A) procedure error
    B) software data error
    C) documentation error
    D) All of these

Answer: D

17. Error caused due to incomplete definition of requirements is:
    A) Faulty definition of requirements
    B) Deliberate deviations from software requirements

C) Client–developer communication failures
D) None of these

Answer: A

18. Quality means conformance to:
    a) Errors
    b) Corrections
    c) Requirements
    d) Deliver in time

    Answer C

19. Which is the most common situations of deliberate deviation for software requirement:
    A) Misunderstanding of the client's instructions as stated in the requirement document
    B) Due to time or budget pressures, the developer decides to omit part of the required functions in an attempt to cope with these pressures.
    C) Inclusion of unnecessary requirements, functions that are not expected to be needed in the near future.
    D) Definitions that represent software requirements by means of erroneous algorithms.

Answer: B

20. Select which one is not an External failure costs?
    a) testing
    b) helpline support
    c) warranty work
    d) complaint resolution

    Answer: A

21. Linguistic errors in the programming languages, errors in the application of CASE and other development tools, errors in data selection are the type of:
    A) Coding errors
    B) Logical design errors
    C) None of these
    D) All of these

Answer: A

22. Select the option which is not an appraisal in SQA?
    a) inter-process inspection
    b) maintenance
    c) testing
    d) quality planning

    Answer: d

23. Shortcomings of the testing process results in:
    A) High number of errors
    B) Failures to document
    C) Incomplete correction of detected errors

D) All of these

Answer: D

24. Software quality is the degree to which component:
    a) Is error free
    b) Meets the requirements
    c) Is updated timely
    d) Contains errors

    Answer: B
25. Which one is Procedure error:
    A) Omission of software functions
    B) Errors in the explanations and instructions given to users
    C) None of these
    D) All of these

    Answer: D

1. One of the most commonly used method to display various activities by horizontal bars whose lengths are proportional to the activities durations is:
    a) GANTT CHART (correct) b) Class Diagram

    c) Use Case Diagram d) Sequence Chart

2. Which of the following is a development risk:
    a) Technological gaps
    b) Staff Shortages
    c) Interdependence of organizational elements
    d) All of the above (correct)

3. Which of the following is not a risk management process:
    a) Risk Identification b) Risk Evaluation

    c) Risk mapping (correct) d) Planning of Risk Management Actions

4. The growing importance of Software Risk Management is expressed in which software development model:
    a) Waterfall model b) Spiral model (correct)

    c) Incremental model d) none of the above

5. When choosing quality goals for quality plan, which measures are preferred:
    a) Qualitative measures b) Quantitative measures (correct)

    c) Analytical measures d) none of these

6. A small but very technical and complicated project has to be completed within 30 days, in this case:
   a) Development and quality plans are required (correct)
   b) Development and quality plans are not required

7. Which of the following is the advantage of "planned" small project over an unplanned one:
   a) A more comprehensive and thorough understanding of the task is attained.
   b) Greater responsibility for meeting obligations can be assigned.
   c) Better understandings with respect to the requirements.
   d) All of the above (correct)

8. In "Internal Projects" no external body participates as ____ in their development:
   a) Developer
   b) Requirement Engineer
   c) Customer/Client (correct)
   d) Project Manager

9. Only one out of five of the quality plan is considered obligatory for small projects, which is:
   a) Planned Software Tests
   b) Quality Goals (correct)
   c) Configuration Management
   d) Review Activities

10. Which of these elements of development plan are considered important for small level project:
    a) Development Risks
    b) Project Benchmarks
    c) Project Cost Estimation
    d) All of these (correct)

11. Which of the following Software Risk Item, fall in software risk class "System Functionality":
    a) Developing wrong software functions
    b) Developing wrong user interface
    c) Both of these (correct)
    d) None of these

12. Which of the following Risk Management Action deals with the relationship between software developer and the costumer:
    a) Internal Risk Management Actions
    b) Subcontracting Risk Management Actions
    c) Customer Risk Management Actions (correct)
    d) None of these

13. We have a requirement "System should be very reliable", its related quality goal will be:
    a) System's recovery time should not exceed 10 minutes in 99% cases of failure.
    b) A system operator should be able to handle 100 customer calls per 8-hours shift.
    c) System availability should exceed 99.5%. (correct)
    d) Waiting time of an operator should not exceed 30 seconds in 99% of the cases.

14. Which of the following is the advantage for organization, in case of development and quality plan preparation:
    a) Reduced risk of market loss.
    b) Reduced risk of being sued for late supply of products.
    c) Reduced risk of impairing the organization's reputation.
    d) All of the above (correct)

15. Project Cost Estimation is an constituent of:
    a) Quality Plan
    b) Development Plan (correct)
    c) Project Proposal
    d) SRS

16. Boehm and Ross (1989) mentioned ____ major software risk items:
    a) 5
    b) 8
    c) 10 (correct)
    d) 20

17. The first step/activity in Risk Management Process is:
    a) Planning of Risk Management Actions
    b) Identification of risk items (correct)
    c) Evaluation of risk items

d) None of the above

18. Quality planning is a process of developing a quality plan for:
    a) Team
    b) Project (correct)
    c) Customers
    d) Project Manager

19. The Marketing Department of Toyware Ltd, a new computer games manufacturer, had planned to hit the market with "Super-Monster 2000", the firm's new, advanced computer game, during the upcoming Christmas season. The Software Development Department claimed that work on the game should commence immediately in order to complete the project on time. Therefore, preparation of a proposal for discussion by the Marketing and Software Development Departments, and the subsequent preparation of development and quality plans, were not viewed as necessary. The Development Department estimated the project budget at $240 000, which was transferred to the Department. According to the marketing timetable, system tests were to be completed no later than 1 October so as to allow the Marketing Department to carry out the required promotion and advertising campaigns in time for Christmas sales season. At the end, there was a Three Month delay and budget exceeded to $385 000 and company stopped developing computer games in future. What do you think was the cause of this failure:

    a) Incompetency of team members
    b) Wrong software development model
    c) Avoidance of Development and quality plan (correct)
    d) None of these

20. Lack of adequate and sufficient professional knowledge and experience refers to which development risk:
    a) Interdependence of organizational elements
    b) Technological gaps (correct)
    c) Staff Shortages
    d) Management Irregularity

21. Development of software functions that are not needed or are incorrectly specified refer to which software risk item:
    a) Gold Plating
    b) Unrealistic Schedules
    c) Developing wrong software functions (correct)

d) Developing wrong user interface

22. Which of the following is an objective of planning:
    a) Resolving development risks.
    b) Implementing SQA activities.
    c) Scheduling development activities.
    d) All of the above (correct)

23. Project Methodology used at each phase is also an element of:
    a) Quality Plan
    b) Development Plan (correct)
    c) Both a and b
    d) None of the above

24. Configuration Management is an element of:
    a) Quality Plan (correct)
    b) Development Plan
    c) Both a and b
    d) None of these
25. Addition of unnecessary features refers to which risk item:
    a) Subcontracting
    b) Gold plating (correct)
    c) Performance shortfall
    d) Personnel shortfall

1. SQA system components can be classified into____ classes.
(a) Two
(b) Three
(c) Five
(d) Six
2.The development life cycle stage components detect _____ errors.
(a) Design Errors
(b) Programming Errors
(c) a and b both
(d) None of the above
3. Following are the Pre-project components
(a) Contract review
(b) Development and quality plans
(c) Design phase
(d)a and b both
4. Which of the following activities is not the part of contract review.:

(a) Clarification of the customer's requirements
(b)Software reuse plans
(c) Evaluation of development risks
(d) All of the above
5. The main issues treated in the project development plan are.
(a) Schedules
(b) Risk Evaluations
(c) Project Methodology
(d)All of the above
6. The main issues treated in the project quality plan are.
(a) Software reuse plans
(b) development tools
(c) Required man power and hardware tools
(d) None of the above
7. Software Project Life Cycle Composed of following two stages:
(a) Design cycle and implementation cycle
(b) Implementation Cycle and operation-maintenance cycle
(c) Development Cycle and operation-maintenance stage
(d) None of the above
8. Several SQA components enter the software development project life cycle at different points. Some main components include:
(a) Formal Design Reviews
(b) Software Testing
(c) Adaptive maintenance
(d) All of the above
9. Which type of documents requires formal professional approval of their quality as described in development contract:
(a) Formal Design Reviews (DRs)
(b) Peer Reviews
(c) Both (a) and (b)
(d) None of the above
10. DRs(Formal Design Reviews) is carried out by:
(a) Development Team
(b) Ad hoc Committees
(c) SQA Team
(d) Project Leader
11. Peer reviews (inspections and walkthroughs) are reviewing short documents, chapters or parts of a report and a coded printout of a software module. Their output consists of:
(a) List of detected defaults
(b) defects summary
(c) statistics for reviewing and improving development methods
(d) All of the above
12. Correct reason for doing "Expert Opinions" is:
(a) Due to Sufficient in-house professional capabilities
(b) Due to accessibility of in-house professionals
(c) both (a) and (b)
(d) Due to major disagreement among the organization's senior professionals.
13. "Modification of current software to new circumstances and customers without changing the

basic software product." is known as
(a) Functionality improvement maintenance
(b) Adaptive maintenance
(c) Corrective maintenance
(d) All of the above
14. Why is the contribution of external participants necessary for assuring the quality of software?
(a) because of technical or personals interests
(b) because of complex and large projects
(c) both (a) & (b)
(d) None
15. Which of the following are infrastructure components for error prevention?
(a) Procedures and work instructions
(b)Staff training, retraining, and certification
(c) Configuration management
(d) All of the above
16. To combine higher quality with higher efficiency, which supporting quality devices are used?
(a) Checklists
(b) Templates
(c) both (a) & (b)
(d) None
17. Why is the contribution of external participants necessary for assuring the quality of software?
(a) Training new employees
(b) Certifying employees proven employees
(c) Continuously changing skilled staff
(d) both (a) & (b)
18. Correction of similar faults found in other projects and among the activities performed by other teams, is part of ?
(a) Supporting quality devices
(b) Staff training, instruction and certification
(c) Preventive and corrective actions
(d) None
19. Configuration management deals with these hazards by introducing procedures to control the _____.
(a) change process
(b) development process
(c) design process
(d) testing process
20. Documentation control functions refer mainly to?
(a) customer requirement documents
(b) contract documents
(c) design reports
(d) All of the above
21. Quality records mainly contribute to the system's ability to respond to _____ in the future.
(a) legal claims
(b) customer claims
(c) both (a) & (b)

(d) None
22. Project control activities focus on:
(a) Resource usage
(b) Schedules
(c) both (a) & (b)
(d) None
23. Among the software quality metrics available or still in the process of development, we can list metrics for:
(a) legal claims
(b) Risk management activities
(c) The budget
(d) Help desk and maintenance teams' productivity
24. The main objectives of the SQA organizational base are:
(a) To develop and support implementation of SQA components.
(b) To detect deviations from SQA procedures and methodology.
(c) To suggest improvements to SQA components.
(d) All of above
25. The responsibilities of top management include:
(a) Definition of the quality policy
(b) Preparation of annual quality programs
(c) Conduct of internal quality assurance audits
(d) Leadership of quality assurance various committees
26. The issues dealt with by the SQA committees are:
(a) Initiation and development of new SQA components and improvement of existing components.
(b)Solution of software quality problems.
(c) both (a) & (b)
(d) None
27. Managerial SQA control components include:
(a) Project progress control (including maintenance contract control)
(b) Software quality metrics
(c) Software quality costs.
(d) All of above
28. The goals of software quality assurance includes.
(a) Objective professional evaluation.
(b) Measurement of the achievements of the organization's quality systems.
(c) Utilization of international professional knowledge.
(d) both (a) & (c)
(e) All of the above
29. The standards available may be classified into sub-classes:
(a) Quality management standards.
(b) Project process standards.
(c) both (a) & (b)
(d) none of the above
30. Decisions regarding the organization's software quality management system fall into main categories:
(a) The SQA organizational base
(b) The SQA components to be implemented within the organization and the extent of their use.

(c) both (a) & (b)
(d) none of the above
31. Decisions regarding the organization's software quality management system are affected by a number of fundamental considerations that reflect the characteristics of:
(a) the organization.
(b) the software development projects and maintenance services to be performed.
(c) the organization's professional staff.
(d) All of these
32. Project and maintenance service considerations could be:
(a) The level of software complexity and difficulty.
(b) Level of acquaintance with team members.
(c) The extent of software reuse in new projects.
(d) both (a) & (c)
(e) All of the above
33. Projects performed by teams who have not worked together or have served the organization for only a short time
(a) require greater and more intense SQA efforts
(b) require the fewer SQA efforts
(c) require less experience of SQA
(d) both (b) & (c)

MCQs

1. SCM deals with all the issues related to
(a) Control of soft-ware changes
(b) Proper documentation of changes
(c) Registering and storing the approved software versions
(d) All of the above

2. A unit of software code, a document or piece of hardware is defined as an SCI if it is assumed that
(a) It is not needed any further
(b) It's error prone
(c) It may be needed for further development
(d) None of the above

3. The SCIs are generally placed into four classes,
(a) One
(b) Two
(c) Three
(d)Four

4. The SQA component under whose heading all the activities necessary to attend to the availability and accuracy of information regarding all aspects of a software configuration is called:
(a) Software Control Authority
(b) Software configuration management (SCM)
(c) Software Configuration Panel
(d) All of the above

5. During the development stage, the project manager _____ charged with the authority to carry out SCM responsibilities.
(a) Can't be
(b) Must not be
(c) Must be
(d) May be

6. Based on the project plan, the _____ sets the release dates of baseline versions,
(a) SQA Manager
(b) Development team
(c) The tester
(d) SCMP

7. All the instructions and procedures necessary for performing SCM tasks at this stage are documented in the SCMP.
(a) Development Artifact Document
(b) SR document
(c) SCMP
(d) None of the above

8. According to the linear model, _____- unique software system's configuration version/s serve/s all customers at any given time.

(a) **Only One**

(b) Two
(c) Three
(d) All of the above

9. The SCM is required to provide information to
(a) All of the mentioned
(b) Professionals
(c) Maintenance teams
(d) Customer representative

10. Intermediate versions are software configuration versions released, in most cases, to respond to _____:

(a) Long term needs
(b) Immediate needs
(c) For prototype
(d) None of the above

11. Baseline versions are configuration versions that are planned ahead, during a system's development or operating stage.

(a) Long term versions
(b) None
(c) Intermediate versions

(d) Baseline versions

12. According to _____, several parallel versions of the software are developed to serve the needs of different customers simultaneously throughout the system's life cycle:
(a) **Tree Evolution Model**
(b) Linear Evolution Model
(c) both (a) and (b)
(d) None

13. _____ introduce minor changes and corrections to a given software configuration version.

(a) Prototypes
(b) Revisions
(c) New versions
(d) None

14. A _____ of the software is considered to have been completed once the changed SCIs replace the former SCIs.
(a) A prototype
(b) A revision
(c) A new version
(d) None

15. While change efforts are directed to one or several SCIs, the user experiences the changes:
(a) Directly
(b) **Indirectly**
(c) They never experience
(d) None

16. A unit of software code, a document or piece of hardware is defined as an
(a) Version
(b) SCM
(c) SCI
(d) None

17. The approved state of an SCI at any given point of time during the development or maintenance process is:
(a) Final version
(b) Linear version
(c) Intermediate version
(d) SCI version

18. An approved selected set of documented SCI versions that constitute a software system or document at a given point of time,
(a) Supporting quality version
(b) SCI version
(c) Software configuration version
(d) None

19. The system failures generally occur as a result of damage done to _____ between the changed SCIs and other SCIs left unchanged:
(a) Interfaces
(b) Code
(c) Database
(d) None

20. Numeration conventions have been formulated to identify SCIs; the most commonly used is _____ numeration,
(a) Variable character
(b) Binary
(c) Hexadecimal
(d) Decimal

21. The need to release a new software configuration version usually stems from one or more of the following conditions:

(a) Defective SCIs
(b) Special features demanded by new customers
(c) The team's initiatives to introduce SCI improvements
(d) All of the above

22. The numeration conventions can likewise be used to identify firmware to be embedded in a variety of product lines and models, but these may require _____:

(a) More SCIs
(b) More memory
(c) Time
(d) Special adaptations

23. Within the framework of software configuration management, the _____ must see to it that all documentation tasks are properly performed.

(a) Resource allocator
(b) Project manager
(c) System Analyst
(d) Project controller

24. SCM audits may be also performed for a sample of planned releases, as specified in the _____.

(a) SCMP
(b) SDLC
(c) Documents
(d) Artifacts

25. The computerized SCMP tools differ in their level of

(a) Comprehensiveness,
(b) Flexibility

(c) Ease of us.
(d) All of the above

1. The number of operational modes a product can permit are much less for,
   a) Software Product
   b) Industrial Product
2. A typical software package one can find software operation possibilities, how many?
   a) Hundreds
   c) Thousands
   b) Millions
   c) Fewer
3. Most of defects in industrial products are detected in
   a) requirements process
   b) testing process
   c) manufacturing process
   d) none
4. Defects in products are:
   a) Visible in industrial Product
   b) Invisible in Software Product
   c) Both a & b
   d) None of these
5. Quality Assurance is needed for Software products because:
   a) They have more product complexity
   b) Defects aren't easily detectable
   c) Opportunities to detect defects arise in all phases
   d) All of above
6. In the _____ phase of software development, efforts of the development teams and software quality assurance professionals are directed toward detecting inherent product defects.
   a) Product development.
   b) Product production planning
   c) Manufacturing
   d) None of the above
7. Most of defects in software products are detected in
   a) Product development
   b) Product production planning
   c) Manufacturing
   d) All of the above
8. The _____ of software is limited to copying the product and printing copies of the software manuals
   a) Product development
   b) Product production planning
   c) Manufacturing
   d) All of the above
9. In _____ phase of industrial product development, the production process and tools are designed and prepared
   a) Product development

b) Product production planning
c) Manufacturing
d) All of the above

10. _____ phase is not required for the software production process, as the manufacturing of software copies and printing of software manuals are conducted automatically
    a) Product development
    b) Product production planning
    c) Manufacturing
    d) All of the above
11. Which of the following is not a classification of a team?
    a) Process improvement team
    b) Cross-functional team
    c) Natural work team
    d) Group-directed/group-managed work team
12. Number of factors usually motivate the establishment of a project team?
    a) 3
    b) 4
    c) 2
    d) 5
13. Which one of the following is **not** a characteristic of a team?
    a) Minimal and formal knowledge sharing
    b) Collective output
    c) Individual and collective responsibility
    d) Fluid dimension to roles and tasks
14. What is characteristic for the location of a virtual team?
    a) In the same country
    b) remotely
    c) In the same industry
    d) In the same building
15. Cross-functional teams are formed to solve complex problems.
    a) True
    b) False
16. "Metal processing equipment" are an example of
    a) Input interfaces from others to your system
    b) Output interfaces from your system to others
    c) I/O interfaces to the machine's control board
    d) None
17. When an existing team member leaves the team, the team leader should _____?
    a) Delay the project
    b) Change the project according to team size
    c) Hire new employee & work within decided timetable
    d) Increase the working hours of existing employees
18. Customers who develop or purchase a software system expect to continue utilizing it for _____?
    a) A long time (5-10 years)

b) Few months only (2-3 months)
c) A lifetime
d) No time

19. During the service period, the need for maintenance will eventually arise. In most cases, the developer is required to supply these services in what way?
a) Indirectly
b) Directly
c) Do not provide maintenance

20. The **environmental characteristics** create a need for intensive and continuous _____ efforts parallel to the _____ efforts that have to be invested in order to assure the project's quality.
a) managerial, developmental
b) managerial, professional
c) professional, developmental
d) financial, managerial

21.Who need to invest a considerable amount of effort in the oversight of activities in order to meet the contract's requirements.

a) The managers of software development and maintenance projects
b) Project Team
c) Customer
d) CEO of the company

22- the activities of software development and maintenance need to cope with:

a) The project budget.
b) The project timetable.
c) A defined list of functional requirements that the developed software and its maintenance need to fulfill.
d) All of the above

23- Throughout the process of software development and maintenance, activities are under the over-sight of the ___?

a) customer
b) development team
c) Portfolio Manager
d) None of the above

24- Which of the following in **not** a characteristic of The environments for which SQA methods are Developed:

a) Contractual conditions.
b) Subjection to customer–supplier relationship.
c) Required teamwork.
d) None Of the above

25- The need for a variety of specializations in order to carry out the project.

a)True

b)False

1. **Software quality assurance consists of which function of management.**
   a) reporting functions
   b) auditing functions

   c)both and b

   d)all of the above

2. **Which of the following is not included in prevention cost?**
   a) equipment calibration and maintenance
   b) formal technical reviews
   c) test equipment reviews
   d) quality planning reviews

3. **Select the people who identify the document and verifies the correctness of the software…**
   a) Project manager
   b) SQA team
   c) Project team
   d) All of the mentioned

4. **Select the option which is not an appraisal in SQA?**
   a) inter-process inspection
   b) maintenance
   c) testing
   d) quality planning

5. **What happened if an expected result is not specified then**
   a. we cannot run the test
   b. we cannot automate the user input values
   c. it may be difficult to determine if the test has passed or failed
   d. it may difficult to repeat the test

6. **Loop Testing methodology includes which of the following.**
   a. Simple Loops
   b. Nested Loops
   c. Concatenated Loops
   d. All of the above

7. **Faults are found most cost-effectively in which test activity?**
   a. design
   b. execution
   c. planning
   d. Check Exit criteria completion

8. **component testing is responsible of which of the person**
   a) Software tester
   b) Designer
   c) Developer
   d) User

9. **which level of testing is used to identifing the defects …**
   a) Acceptance testing

b) Integration testing
c) Unit testing
d) System Testing

10. **Which phase is considered as software architecture phase..**
a) Design
b) Implementation
c) Development
d) Requirement gathering

11. Test level is performed in which level…
a)It depends on nature of a project.
b) Unit ,System, Integration,Acceptance
c) Unit, Integration, Acceptance, System
d) Unit,Integration, System,Acceptance

12. **Acceptance testing through which user is satisfied is considered as which of the following…**
a. White box testing
b. Gray box testing
c. Black box testing
d. None of the above

13. **tranning cost fall in which phase …**
a. Failure
b. Prevention
c. Build
d. Appraisal

14. **Test Readiness is conducted in which phase…**
a. project manager
b. test manager
c. quality assurance
d. user or customer

15. **Select which measurement taken by the two people are same refers to the term which is called as…**
a. reliability
b. validity
c. calibration
d. ease of use and simplicity

16. **Choose which effort is required for locating and fixing an error in an operational program**
A. Efficiency
B. Usability
C. Maintainability
D. Testability

17. **What is the basic reason for the poor quality in an organization can be…**
A. Lack of knowledge about quality
B. Lack of involvement by management
C. Time constraints

D. Both an and b
E.None of the above

18. The effort required for modifying an operational program.
A. Availability
B. Maintainability
C. Portability
D.Flexibility

19. To achieve the software Quality is easily adaptable only with programming skills?
A. True
B. False

20. **.What is the Failure to enforce standards as a contributor to poor quality is because of…**
A. Lack of knowledge
B. Lack of involvement by management
C. None of the above
D. Both A and B.

21. For the achievement of quality like make the products which have no defect such products and services we require called.
A. Close cooperation between management and staff
B. Commitment
C. An environment in which quality can flourish
D. All of these

22. **Is the 100% Quality of a software is achieveable.**
A.YES
B.NO
C.depent on tester
D.envirenment factor involve

23. **What type of change do you need before when you are able to obtain a behavior change?**
A. Lifestyle change
B. Internal change
C. Vocabulary change
D. Management change

24. What is the term RE represent in the quantifying risk…
A. Risk End
B. Risk behavious
C. Risk ratio
D. None of these

25. For the achievement of quality like make the products which have no defect such products and services we require called.
A. Close cooperation between management and staff
B. Commitment
C. An environment in which quality can flourish
D. All of these

Chapter 21

1. **Which of these is a kind of Software quality matrics**

   (a) Product matrics

   (b) Process matrics

   (c) Project matrics

   (d) all

2. **The intent of project matrics is**

   (a) Minimization of development schedule

   (b) for strategic purposes

   (c) assessing project quality on ongoing basis

   (d) minimization of development schedule and assessing project quality on ongoing basis

3. **Select the general requirements of software quality matrics**

   (a) relevant

   (b) comprehensive

   (c) mutually exclusive

   (d) all

4. **Usability can be measured in term of**

   (a) Intellectual skill to Learn the system

   (b) Time required to become moderately efficient in system usage

   (c) Net increase in productivity

   (d) all the mentioned

5. **Defects removal efficiency (DRE) depends on**

   (a) Error found before software delivery

   (b) Defects found after delivery to user

   (c) both

   (d) varies with project

6. **A graphical technique for finding if changes and variation in matrics are meaningful is known as**

   (a) DRE

   (b) function point analysis

(c) control chart

(d) all above

7. **How complexity of a web page related to link count**

(a) Directly

(b) Indirectly

(c) No relation

(d) all above

8. **Which of the following is not a matric for design model?**

(a) Interface design matrics

(b) Component-Level matrics

(c) Architectural matrics

(d) Complexity matrics

9. **Function point in SE was first proposed by**

(a) Booch

(b) Boehm

(c) jacobson

(d) Albert

10. **Calculation of error density metrics involves**

(a) Software Volume measure

(b) Error counted measure

(c) Both

(d) None

11. **NDE ?**

(a) The number of code errors detected by code inspections and testing.

(b) total number of development (design and code) errors) detected in the development process.

(c) weighted total code errors detected by code inspections and testing.

(d) total weighted development (design and code) errors detected in development process

12. **How many information domain values are used for Function Point Analysis**

(a) 3

(b) 4

(c) 5

(d) 6

13. **Architectural design matrics are ____ in nature**

(a) Black Box

(b) White Box

(c) Gray Box

(d) Green Box

14. **SMI stands for**

(a) Software maturity index

(b) Software mature indicator

(c) Software mature index

(d) Software maturity indicator

15. **The amount of time that the software is available for use Is known as**

(a) Reliability

(b) Usability

(c) Efficiency

(d) Functionality

16. **Size and complexity are a part of**

(a) Product martics

(b) Process martics

(c) Project martics

(d) all

17. **Cost and schedule are a part of**

(a) Product martics

(b) Process martics

(c) Project martics

(d) all

18. **Numbers of errors found per person hours expanded is an example of a**

(a) measurement

(b) measure

(c) martic

(d) all

19. **percentage of modules that were inspected is a part of**

(a) Product martics

(b) Process martics

(c) Project martics

(d) all

20. **Which of the following is not a direct measure of SE process?**

(a) Efficiency

(b) Cost

(c) effort applied

(d) all the mentioned

21. **Usability in metric analysis is defined as the degree to which the software**

(a) stated needs

(b) is easy to use

(c) makes optimal use of system resources

(d) none of the mentioned

22. **Statement and branch coverage metrics are part of**

(a) Analysis Model

(b) Testing

(c) Design Model

(d) Source Code

23. **In size-oriented metrics, metrics are developed based on the**

(a) number of Functions

(b) number of user inputs

(c) number of lines of code

(d) amount of memory usage

24. **Which of the following is the task of project indicators**

(a) help in assessment of status of ongoing project

(b) track potential risk

(c) help in assessment of status of ongoing project & track potential risk

(d) none of the mentioned

25. **MTTC falls the category of**

(a) correctness

(b) integrity

(c) maintainability

(d) all of the mentioned

1) "A process or meeting during which a work product, or set of work products, is presented to project personnel, managers, users, customers, or other interested parties for comment or approval." Review process defined by:

a) **IEEE (1990)**
b) WHO (1990)
c) IEEE(1890)
d) NONE

2) Which one of following is not included in reviews method:

a)Formal design reviews

b) Peer reviews (inspections and walkthroughs)

c) Expert opinions.

d)user opinions

3) In objectives of reviews one of the type direct review deals with:

a) promotion of project

b)current project

c) To identify new risks likely to affect completion of the project.

d)both b & c

4) In objectives of reviews one of the type Indirect review deals with:

a) record analysis & error as a basics for future.

b) informal requirements

c) updated requirements from user

d)all of these

5) Heart of formal design review include:

a) team work

b) procedural order

c) both a & b

d)none of these

6) Formal design reviews, variously called :

a) design review (Dr's)

b) formal design review (FTR)

c)both a & b

d)none

7) DPR stands for:

a) development plan review

b) development product review

c) design plan review

d) design product review

8) PRR stands for:

a) product recycle review

b) product release review

c) product review release

d) product recycle release

9) VDR stands for:

a) visual design review

b) visual description review

c) version description review

10) Responsibilities of review leader include:

a) good relation with project leader & team

b) external position with project leader

c) senior at similar level but not from project leader

d) all of these

11) A short presentation of the design document include in which session:

a) DR session

b) DPR Session

c) ISSR session

12) Design review team include the team size of …… members.

a) 10,12

b) 3 , 5

c) 7

13) The duration of a review session should not exceed more than:

a) 2 hours

b) 2 days

c) 2 weeks

14) The major difference between formal design reviews and peer review methods is:

a) testing and updation

b) participants and authority

c) peer review has large scale team

15) Periodic analysis of the effectiveness of past inspections to improve in:

a) walkthrough

b) design review session

c) peer review

d) inspection

16) peer review method include:

a) pre requisite preparations

b) future preaparations

c) future inspection

17) For analysis process,Transmission of the inspection reports to the internal ……for analysis.

a) correct action process (CAP)

b) Corrective Action Board (CAB)

c) description action board (DAB)

18) ……..findings from an analysis of the design and code inspections conducted on the Litton project.

a) Dobins quotes madachy finding

b) madachy quotes Dobins findings

c) Litton quotes Dobins findings

19) in peer review coverage include …… percentage of document and volume of code

a) small percentage of 5-15%

b) large % of about 80%

c) 50% of total documents

20) Defect density is calculated by:

a) LOC/total pages

b) errors/LOC

c) defects/pages

d) none

21) classification of design errors by severity include except:

a) testing process

b) adversely effect cost, schedule and risks

c) inconveniences for development

22) The main tasks of the review leader for review session is except:

a) The sections prone to defects.

b) most critical sections of documents

c) future plannings for updation

23) walk through include:

a) expert maintenance

b) standards enforcer

c) both

24) Responsibility of outside expert is:

a) future planning

b) expert judgements of document

c) both

25) outside expert judgement is beneficial in sitauations:

a) indecisive caused by disagreements in team

b) insufficient professional capabilities

c) both

1. ISO/IEC 15504 trials had goals
    a) To validate the model's conformity with current standard.
    b) To verify its usability in determining whether software satisfies user
    c) To gain experience in applying the model.
    d) All of these-

2. The ISO/IEC 15504 includes _____processes that the organization has to perform successfully to reach capability level 5
    a) 27
    b) 28
    c) 29-
    d) 30

3. Quality management standards and methodologies focus on the software quality assurance system
    a) Its organization, infrastructure and requirements-
    b) Methods and tools to be used in the hands of the organization.
    c) Both a & b
    d) None

4. Quality management standards focus ____ of SQA.
    a) What-
    b) How
    c) Both
    d) None

5. The Scope of Quality Management standards by
    a) Aims of certification
    b) Aims of assessment
    c) Both -
    d) None

6. The certification standards emphasis is
    a) Internal
    b) External -
    c) Both
    d) None

7. The emphasis of the assessment standards is
    a) Internal-
    b) External

c) Both
d) None

8. Principles that guide the new ISO 9000-3 include
    a) Customer Focus
    b) Leader Ship
    c) Pricing
    d) a & b-
    e) all

9. The current standard edition of ISO, 9000-3 (ISO 1997) includes 20 requirements that are classified into _____ groups.
    a) 4
    b) 5-
    c) 6
    d) 7

10. Quality Management System requirement class includes
    a) General Requirements
    b) Documentation Requirements
    c) Both-
    d) none

11. Product Realization includes
    a) General Requirements & Documentation Requirements,
    b) Monitoring and improvement
    c) Human resource and infrastructure
    d) Design development and purchasing-

12. _____was launched in the late 1980s by the UK software industry in cooperation with the UK Department for Trade and Industry to promote development of a methodology for adapting ISO 9001 to the characteristics of the software industry.
    a) BSI
    b) IT department
    c) TickIT-
    d) None

13. Organizations wishing to obtain ISO 9000-3 certification are required to complete
    a) Develop the organization's SQA system
    b) Implement the organization's SQA system
    c) Undergo certification audits.
    d) All-

14. Once the components of the SQA management system conform to certification demands, efforts are shifted towards.
    a) Designing the system
    b) Testing the system

c) Implementing the system-
d) All

15. The main sources of information for certification audits are
    a) interviews with members of the audited unit
    b) review of documents
    c) both-
    d) none
16. CMMI-SE/SW integrates
    a) the system engineering and software engineering-
    b) system engineering, software engineering and integrated product/process
    c) system engineering, software, integrated product/process and supplier sourcing aspects.
    d) None

17. CMMI models consists of _____ steps
    a) 4
    b) 5
    c) 6
    d) 7

18. Bootstrap trains levels of registered assessors
    a) Trained assessors
    b) Assessors
    c) Lead assessors
    d) All
19. Predictable process in capabilities level includes
    a) Measurement
    b) Process control
    c) Process defining and resources
    d) a & b
    e) all
20. The emphasis of the assessment standards is internal because
    a. It focuses on software process improvement.
    b. It support the supplier–customer relationships
    c. Both
    d. none